

COMMONWEALTH OF VIRGINIA
Department of Environmental Quality

Subject: Waste Guidance Memo No. ## **GUIDANCE TO REDUCE MONITORING LOCATIONS AND CONSTITUENT MONITORING FOR APPENDIX IX TO PART 264 GROUNDWATER MONITORING UNDER SECTIONS VAC20-60-264.98 AND 9VAC20-60-264.99 OF THE CODE OF VIRGINIA**

To: Director, Office of Hazardous Waste Permitting,

From: Karen Jackson Sismour
Director, Waste Division

Date:

Copies:

Summary:

The Environmental Protection Agency (EPA) has promulgated changes to the regulatory requirements of the Resource Conservation and Recovery Act (RCRA) hazardous waste program to reduce the paperwork burden that these requirements impose on the states, EPA, and the regulated community. This rulemaking will streamline information collection requirements, ensuring that only the information that is actually needed and used to implement the RCRA program is collected and the goals of protection of human health and the environment are retained. The Virginia Department of Environmental Quality (VADEQ) has adopted this Immediate and Final Rule by reference. The provisions of this act became effective beginning on August 23, 2006.

Electronic Copy:

An electronic copy of this guidance is available on DEQ's website at <http://www.deq.virginia.gov/>.

Contact Information:

Please contact Erich Weissbart with any questions regarding the application of this guidance.

Disclaimer:

This document is provided as guidance and, as such, sets forth standard operating procedures for the agency. However, it does not mandate any particular method nor does it prohibit any alternative method. If alternative proposals are made, such proposals should be reviewed and accepted or denied based on their technical adequacy and compliance with appropriate laws and regulations.

GUIDANCE TO REDUCE MONITORING LOCATIONS AND CONSTITUENT MONITORING FOR APPENDIX IX TO PART 264 GROUNDWATER MONITORING UNDER SECTIONS 9 VAC 20-60-264.98 AND 9 VAC 20-60-264.99 OF THE CODE OF VIRGINIA

Introduction

On April 4, 2006, the Environmental Protection Agency (EPA) published the Burden Reduction Initiative Final Rule, promulgating changes to the Resource Conservation and Recovery Act (RCRA) to reduce the paperwork burden these requirements impose on the states, EPA, and the regulated community. The final rule changes a number of the regulatory requirements found under 40 CFR parts 260 through 270, including elimination of selected recordkeeping and reporting requirements. The requirements regarding elimination of certain recordkeeping and reporting requirements may impact the groundwater monitoring requirements for hazardous waste treatment, storage and disposal facilities seeking a RCRA permit, specifically Appendix IX analyses.

Authority

The Virginia Hazardous Waste Monitoring Regulations (VHWMR) require comprehensive Appendix IX analyses once it has been determined that there is a release from a regulated unit.

Facility requirements for monitoring

Hazardous waste treatment, storage, and disposal facilities must implement groundwater monitoring as a condition for receiving a RCRA permit. The Virginia Hazardous Waste Management Regulations (VHWMR) require a phased approach to ground-water monitoring (detection monitoring, compliance monitoring, corrective action). Groundwater monitoring systems must consist of a sufficient number of wells, properly located and constructed, and capable of ensuring that the groundwater impacts of a treatment, storage, or disposal unit can be determined. Sampling and analysis procedures must also be capable of determining both background quality of groundwater and quality at the point of compliance.

If hazardous constituents are detected in groundwater, more specific monitoring may be required. In this case, a facility would need additional wells, sampling, and analyses to determine the extent and rate of contaminant migration, to determine if the groundwater protection standard is violated, and to indicate the need for, or to measure the effectiveness of, corrective action. Decisions on subsets of wells or what constituents must be sampled will be based on the Director's judgment of required sampling that supports the protection of human health and the environment, as well as the level of knowledge of what contaminants could be present at a site. .

Facilities monitoring groundwater under the detection, compliance, or corrective action modules of a RCRA permit may submit a Class 1 Permit Modification requesting single discrete samples per monitoring well per each semi-annual monitoring event. VADEQ has been implementing this change prior to the regulation revision.

Effect of new rule

Section **9 VAC 20-60-264.99(g)**, which requires that facilities performing compliance monitoring conduct an annual 40 CFR Part 264 Appendix IX (the extensive groundwater monitoring constituent list) analysis of all monitoring wells, has been modified. On a case-by-case basis, as authorized by the Director, a subset of the compliance wells may be sampled.

Additional modifications include **9 VAC 20-60-264.98(d)** to allow for alternative sampling procedures as provided in **9 VAC 20-60-264.97(g)(2)**. Under **9 VAC 20-60-264.98(d)**, a facility must collect at least four samples from each well at least semi-annually. This provision has resulted in sites being required to sample four times within a single monitoring event (replicate sampling), despite the contradiction with **9 VAC 20-60-264.97(g)(2)** which allows for an alternate sampling procedure. To reduce some of the burden related to this sampling and reporting, the last sentence from **9 VAC 20-60-264.98(d)** (requiring a facility to collect at least four samples from each well at least semi-annually) has been removed. The last sentence in **9 VAC 20-60-264.99(f)** (requiring a facility to collect at least four samples from each well at least semi-annually) has also been removed. These changes will prevent 9 VAC 20-60-264.98(d) and 9 VAC 20-60-264.99(f) from unintentionally trumping the flexibility granted by 9 VAC 20-60-264.97(g)(2). (VADEQ has historically allowed the elimination of replicate sampling via the alternate sampling procedure allowed by 9 VAC 20-60-264.97(g)(2)).

The re-sampling requirements in **9 VAC 20-60-264.98(g)(3)** and **9 VAC 20-60-264.99(g)** are changed from "may resample within one month" to "may resample within one month or at an alternative site-specific time frame approved by the Director." This change allows for sampling to be based on site-specific hydrogeologic conditions.

With the revision of 9 VAC 20-60-264.98(g)(2), a Class 1 Permit Modification is required to enact changes to the Permit. At least once initially, a subset of point of compliance wells shall be sampled for 40CFR Appendix IX list of constituents (to establish a basis for subsequent elimination of constituents at each point of compliance well). However, there are a number of circumstances in which a subset of Appendix IX constituents could be approved. Any proposed reduction of Appendix IX constituents will be suites of constituents and not individual constituents (e.g., volatiles vs. trichloroethene; semivolatiles vs. naphthalene)--with the exception of metals. VADEQ will approve the removal of individual metals from the required Appendix IX list of constituents. The criteria for allowing removal of constituents, including suites of constituents are:

- a. Constituents never managed in the unit. Waste constituents that are known or *suspected* to have been managed in the regulated unit(s) and degradation products of known or suspected constituents cannot be removed from the list.
- b. Constituents which cannot be liberated from the soil as a result of geochemical conditions caused by the unit (example: increase in soluble arsenic in a reduced environment).
- c. Constituents for which clear evidence exists that the facility was operated in such a way that the constituents of interest are not likely to have been present (e.g. dioxins/furans unlikely at either a dry cleaner or a waste water treatment pond, etc.).

When facilities have been in the compliance monitoring program for a period of time, it is

appropriate to remove specific point of compliance wells from the annual requirement for Appendix IX groundwater monitoring. As in the statement above, it is appropriate to sample for a subset of constituents of Appendix IX constituents. The following criteria apply:

- d. Historical data for a constituent exists from a minimum of two years to demonstrate that specific point of compliance monitoring wells have never exhibited an Appendix IX detection.
- e. A constituent is known not to have been managed, suspected to have been managed in the unit, or been known or suspected to have been formed in the unit by reactions within the waste stream.
- f. The constituent could not be released from the soils as a result of the unit.

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